## AMENDMENTS TO THE CLAIMS

1.    (Previously Presented) A method, comprising:

operating a first processor connected with a first bus and a second bus

wherein the first processor controls the first bus;

operating a second processor connected with the first bus and the second

bus wherein the second processor controls the second bus;

detecting faults via hardware associated with the first processor and the

second processor, wherein the hardware includes a Redundant Host Controller;

and

responsive to an occurrence of a fault in the first processor, transferring

control of the first bus to the second processor via hardware associated with the

first processor and the second processor, wherein the hardware includes a

Redundant Host Controller.


2.    (Previously Presented) The method of claim 1, wherein the operating the first

processor comprises:

initializing the first processor;

determining whether the first processor is designated to operate in the

active mode or the backup mode;

responsive to the first processor being designated to operate in the active

mode, performing an active mode boot process;

responsive to the first processor being designated to operate in the backup

mode, performing a backup mode boot process; and

performing system host functions.

3.   (Previously Presented) The method of claim 2, wherein the determining whether the first processor is designated to operate in the active mode or the backup mode is based on preconfigured information in the processor's BIOS.

4.   (Previously Presented) The method of claim 2, wherein the active mode boot process comprises:

building a coherent universal map of devices connected with the first bus and the second bus;

determining whether the active mode is a split mode nor a cluster mode;

if the active mode is a split mode, starting drivers on the second bus if all drivers are compatible, and transitioning into a cluster mode if not all drivers are compatible;

if the active mode is a cluster mode, starting all compatible drivers on the second bus; and

if the active mode is neither split mode or cluster mode, assuming a single host operation mode and starting all compatible drivers on the first bus and the second bus.

5.   (Previously Presented) The method of claim 4, wherein the determining whether the active mode is a split mode or a cluster mode is based on preconfigured information in the first processor's BIOS.

6.      (Previously Presented) The method of claim 2, wherein the backup mode boot

process comprises:

        requesting a universal map of devices connected with the first bus and the

second bus;

        determining whether a split mode response has been received from the

second processor;

        if a split mode response has not been received,

        receiving a coherent map of devices connected the second bus from the

second processor,

        entering a warm standby mode, and

        loading all compatible drivers for devices connected with the first bus and

placing them into a pending state; and

        if a split mode response has been received,

        determining whether a split mode request from the second processor to the

first processor has been successful,

        if the split mode request has been successful, determining whether all

drivers for devices on the first bus are compatible,

        starting all registered device drivers on the second bus if all drivers are

compatible, and

        transitioning into a cluster mode and loading and starting all drivers for the

second bus is not all loaded drivers are compatible, and

        if the split mode request has not been successful,

        transitioning into a cluster mode, and

        loading and starting all drivers for devices connected with the first bus.

7.    (Previously Presented) The method of claim 1, wherein the transferring control of the first bus to the second processor comprises:

suspending control of and disconnecting the first processor from the first bus;

sending a switch-over message to the second processor; and

activating device drivers on the second processor to take control of bus devices.


8.    (Cancelled)


9.    (Cancelled)


10.   (Currently Amended) A system comprising:

a first storage device coupled with a first processor connected with a first bus operating in an active mode so that the first processor controls the first bus;

a second storage device coupled with a second processor connected with a second bus operating in an active mode so that the second processor controls the second bus; and

hardware associated with the first processor and the second processor to detect faults in the processors transfer control of the first bus to the second processor via hardware associated with the first processor and the second processor responsive to detection of a fault.

11. (Previously Presented) The system of claim 10, wherein the first processor:

determines whether the first processor is designated to operate in the active mode or the backup mode;

responsive to the first processor being designated to operate in the active mode, performs an active mode boot process;

responsive to the first processor being designated to operate in the backup mode, performs a backup mode boot process; and

performs system host functions.

12. (Previously Presented) The system of claim 11, wherein the determining whether the first processor is designated to operate in the active mode or the backup mode is based on preconfigured information in the processor's BIOS.

13. (Previously Presented) The system of claim 11, wherein the active mode boot process comprises:

building a coherent universal map of devices connected with the first bus and the second bus;

determining whether the active mode is a split mode or a cluster mode;

if the active mode is a split mode, starting drivers on the second bus if all drivers are compatible, and transitioning into a cluster mode if not all drivers are compatible;

if the active mode is a cluster mode, starting all compatible drivers on the second bus; and

if the active mode is neither split mode or cluster mode, assuming a single

host operation mode and starting all compatible drivers on the first bus and the

second bus.

14.     (Previously Presented) The system of claim 13, wherein the determining whether

the active mode is a split mode or a cluster mode is based on preconfigured

information in the processor's BIOS.


15.     (Previously Presented) The system of claim 11, wherein the backup mode boot

process comprises:

requesting a universal map of devices connected with the first bus and the

second bus;

determining whether a split mode response has been received from the

second processor;

if a split mode response has not been received,

receiving a coherent map of devices connected the second bus from the

second processor,

entering a warm standby mode, and

loading all compatible drivers for devices connected with the first bus and

placing them into a pending state; and

if a split mode response has been received,

determining whether a split mode request from the second processor to the

first processor has been successful,

if the split mode request has been successful, determining whether all

drivers for devices on the first bus are compatible,

starting all registered device drivers on the second bus if all drivers are compatible, and

transitioning into a cluster mode and loading and starting all drivers for the second bus is not all loaded drivers are compatible, and

if the split mode request has not been successful,

transitioning into a cluster mode, and

loading and starting all drivers for devices connected with the first bus.

16. (Previously Presented) The system of claim 10, wherein the transferring control of the first bus to the second processor comprises:

suspending control of and disconnecting the first processor from the first bus;

sending a switch-over message to the second processor; and

activating device drivers on the second processor to take control of bus devices.

17. (Cancelled)

18. (Cancelled)

19. (Previously Presented) A machine-readable medium having stored thereon data representing a set of instructions which, when executed by a machine cause the machine to:

operate a first processor connected with a first bus and a second bus

wherein the first processor controls the first bus;

operate a second processor connected with the first bus and the second bus

wherein the second processor controls the second bus;

detect faults via hardware associated with the first processor and the

second processor, wherein the hardware includes a Redundant Host Controller;

and

responsive to an occurrence of a fault in the said first processor,

transferring control of the first bus to the second processor via hardware

associated with the first processor and the second processor, wherein the hardware

includes a Redundant Host Controller.


20.     (Previously Presented) The machine-readable medium of claim 19, wherein the

operating a first processor comprises:

initializing the first processor;

determining whether the first processor is designated to operate in the

active mode or the backup mode;

responsive to the first processor being designated to operate in the active

mode, performing an active mode boot process;

responsive to the first processor being designated to operate in the backup

mode, performing a backup mode boot process; and

performing system host functions.

21. (Previously Presented) The machine-readable medium of claim 20, wherein the determining whether the first processor is designated to operate in the active mode or the backup mode is based on preconfigured information in the processor's BIOS.

22. (Previously Presented) The machine-readable medium of claim 20, wherein the active mode boot process comprises:

building a coherent universal map of devices connected with the first bus and the second bus;

determining whether the active mode is a split mode or a cluster mode;

if the active mode is a split mode, starting drivers on the second bus if all drivers are compatible, and transitioning into a cluster mode if not all drivers are compatible;

if the active mode is a cluster mode, starting all compatible drivers on the second bus; and

if the active mode is neither split mode or cluster mode, assuming a single host operation mode and starting all compatible drivers on the first bus and the second bus.

23. (Previously Presented) The machine-readable medium of claim 22, wherein the determining whether the active mode is a split mode or a cluster mode is based on preconfigured information in the processor's BIOS.

24.     (Previously Presented) The machine-readable medium of claim 20, wherein the

backup mode boot process comprises:

        requesting a universal map of devices connected with the first bus and the

second bus;

        determining whether a split mode response has been received from the

second processor;

        if a split mode response has not been received,

        receiving a coherent map of devices connected the second bus from the

second processor,

        entering a warm standby mode, and

        loading all compatible drivers for devices connected with the first bus and

placing them into a pending state; and

        if a split mode response has been received,

        determining whether a split mode request from the second processor to the

first processor has been successful,

        if the split mode request has been successful, determining whether all

drivers for devices on the first bus are compatible,

        starting all registered device drivers on the second bus if all drivers are

compatible, and

        transitioning into a cluster mode and loading and starting all drivers for the

second bus is not all loaded drivers are compatible, and

        if the split mode request has not been successful,

        transitioning into a cluster mode, and

        loading and starting all drivers for devices connected with the first bus.

25. (Previously Presented) The machine-readable medium of claim 19, wherein the transferring control of the first bus to the second processor comprises:

suspending control of and disconnecting the ~~said~~ first processor from the first bus;

sending a switch-over message to the second processor; and

activating device drivers on the second processor to take control of bus devices.

26. (Cancelled)

27. (Cancelled)

28. (Previously Presented) An apparatus comprising:

a first processor connected with a first bus operating in an active mode so that the first processor controls the first bus;

a second processor connected with a second bus operating in an active mode so that the second processor controls the second bus; and

hardware associated with the first processor and the second processor to detect faults in the processors transfer control of the first bus to the second processor via hardware associated with the first processor and the second processor responsive to detection of a fault, wherein the hardware includes a Redundant Host Controller.

29.     (Previously Presented) The apparatus of claim 28, wherein the first processor:

        determines whether the first processor is designated to operate in the

active mode or the backup mode;

        responsive to the first processor being designated to operate in the active

mode, performs an active mode boot process;

        responsive to the first processor being designated to operate in the backup

mode, performs a backup mode boot process; and

        performs system host functions.


30.     (Previously Presented) The apparatus of claim 29, wherein the determining

whether the first processor is designated to operate in the active mode or the

backup mode is based on preconfigured information in the processor's BIOS.